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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,979	04/05/2004	Longzhi Jiang	GEMS 0219 PA	2978
27256	7590	05/02/2006	EXAMINER	
ARTZ & ARTZ, P.C. 28333 TELEGRAPH RD. SUITE 250 SOUTHFIELD, MI 48034			VARGAS, DIXOMARA	
			ART UNIT	PAPER NUMBER
			2859	

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/708,979

Applicant(s)

JIANG ET AL.

Examiner

Dixomara Vargas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 6, 8-13 and 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Laskaris et al. (U. S. Patent 6,246,308 B1).

With respect to claims 1, 10, 16 and 19, Laskaris discloses a MRI assembly comprising (as seen on Figures 1 and 2) an outer thermal shield having an operational temperature (#52); and a coldhead sleeve assembly comprising: a coldhead sleeve (#2), a plurality of braid elements (#64) mounted to a cooler block (#60), said plurality of braid elements connecting said coldhead sleeve to said cooler block (Fig. 2); a highly thermally conductive block (#62) mounted between said outer thermal shield, said highly thermally conductive block welded to said outer thermal shield and welded to said cooler block (as seen on Fig. 2), said highly thermally conductive block having greater thermal conductivity than said outer thermal shield (Column 4, lines 48-50).

3. With respect to claims 2, 12 and 19, Laskaris discloses said highly thermally conductive block has a residual resistance ratio of 100 within said operational temperature (Column 4, lines 48-66).

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4. With respect to claims 3, 13 and 19, Laskaris discloses said highly thermally conductive block has a residual resistance ratio of 3000 within said operational temperature (Column 4, lines 48-66).
5. With respect to claims 4, 9, 17 and 18, Laskaris discloses said highly thermally conductive block comprises high purity aluminum (Column 4, lines 48-66).
6. With respect to claims 6 and 11, Laskaris discloses said cooler block comprises copper (Column 4, lines 48-66).
7. With respect to claim 8, Laskaris discloses said highly thermally conductive block has a residual resistance ratio of equal to or greater than copper (Column 4, lines 48-66).

***Allowable Subject Matter***

8. Claims 5, 7, 14, 15 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
9. The following is a statement of reasons for the indication of allowable subject matter:
  - a. With respect to claims 5 and 14, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a MRI assembly comprising said highly thermally conductive block comprises a thermally conductive block cross-section, said thermally conductive block cross-section equal to a cooler block cross-section of said cooler block in combination with the remaining limitations of the claims 1 or 10 above.

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- b. With respect to claims 7 and 15, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a MRI assembly comprising an operational temperature less than 50 K in combination with the remaining limitations of claims 1 or 10 above.
- c. With respect to claim 20, see reasons for claim 5 above.

### ***Response to Arguments***

- 10. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dixomara Vargas whose telephone number is (571) 272-2252. The examiner can normally be reached on Monday to Thursday from 8:00 am. to 4:30 pm..

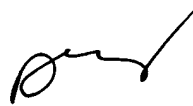
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dixomara Vargas  
Art Unit 2859  
May 1, 2006



Diego Gutierrez  
Supervisory Patent Examiner  
Technology Center 2800